

The Basics of MIRCal Edit Programs for Inpatient, Emergency Department, and Ambulatory Surgery Data

Most of you are familiar with OSHPD's Medical Information Reporting for California (MIRCal), a web-based application that provides a convenient and secure way for healthcare facilities to submit patient-level data to OSHPD. But how does MIRCal edit the data? What types of errors does MIRCal identify?

Originally, (circa 1980) OSHPD's data validation process consisted of one edit program that checked for blank and invalid values within each record. The edit program was developed to provide more accurate data for administrative planning, research, legislative analyses, outcome studies, and other uses of OSHPD's patient data. OSHPD's editing process has evolved from a main-frame edit program of identifying errors and mailing computer print-outs (error reports) to the facilities for correction, to a sophisticated web-based validation process that includes over 700 critical and non-critical edits. Records with critical errors must be corrected to the established Error Tolerance Level (ETL). Non-critical, or warning edits, are not applied towards ETL, but OSHPD encourages facilities to review these records to determine if correction is needed.

MIRCal processes every record through a series of complex editing programs. Inpatient discharge data are processed through 9 edit programs, while Emergency Department (ED) and Ambulatory Surgery (AS) data are processed through 3 edit programs. Facilities can submit their data by file transmission or by manually entering records through MIRCal's web entry function. Once records are processed, usually within 24 hours, facilities can access Error Summary and Detail Reports, which contain detailed information of possible errors in their Inpatient, ED or AS data. Facilities can make on-line corrections to each record or re-submit a corrected file. In addition to the error reports, informational reports are also generated by MIRCal—a Data Distribution Report and an E-Code report. For inpatient data, an MDC/DRG Grouper Statistics Report and Questionable DRG Report are also generated. Only the submitting facility can view/print its own report, and only via a secure, password-protected log-on.

Data are rejected if the percentage of critical errors is above the established ETL, as described in Section 97248 of the California Code of Regulations. OSHPD is required to approve or reject the data within 15 days of receipt. Data are approved when submitted as a Formal submission and errors are at or below the established ETL. Upon approval, an email notification is automatically sent to the facility. OSHPD also mails an approval letter to the facility administrator, with a copy to the (MIRCal) primary contact. Within fifteen days of approval, an individual facility profile report is posted on the public MIRCal website: "Hospital Inpatient Profile Report" for inpatient data and "ED/AS Facility Profile Report" for ED and AS data.

INPATIENT DATA EDIT PROGRAMS

Transmittal Validation

The inpatient editing process starts with Transmittal Validation. Transmittal edits are only applied to data when submitted as a File Transmission. There are three levels of Transmittal Validation: The first level checks files for viruses, empty file, or multiple files in a zipped file. The second level checks each record for proper format: correct record length, no non-ASCII characters, and Carriage Control and Line Feed inserted at the end of each record. The third level checks for discrepancies in the number of records submitted (based on the number entered by the facility on the Transmittal Page), invalid discharge dates, and incorrect facility ID numbers. Data must pass all three levels before continuing on to the next edit program.

Licensing Check

The Licensing Check edits data against OSHPD's Licensing File to verify that the data reported are consistent with the Types of Care and Services for which the facility is licensed. Reports will fail the Licensing Check if they do not match OSHPD's licensing information, and editing is terminated. Typically, the facility will contact OSHPD for assistance with resolving Licensing Check errors.

Once data pass the Transmittal Validation and Licensing Check, MIRCal processes the data thorough the remaining 7 edit programs. This is a comprehensive validation process that checks individual records for blank, invalid, or illogical relationships between data elements within the record or when compared to other records submitted.

For each of the following edit programs, MIRCal generates error summary and/or detail reports to assist the facility in reviewing records with errors and making any necessary corrections.

Ungroupable Records (DRG 470)

ETL: No DRG 470 records

This program uses a 3M DRG grouper to group each record to the appropriate DRG category based on principal diagnosis, secondary diagnoses, surgical procedures, age (date of birth), sex, and patient disposition. If a record contains a blank, invalid or illogical value in any of these fields, then it is assigned a DRG 470 – Ungroupable Record. MIRCal applies either a critical S flag or non-critical SW flag to the affected data element(s) in the record.

Trend Edits

ETL: No critical T flags

This is MIRCal's most complex edit program. The Trend Edit Program compares the facility's current data against data submitted in two prior (historical) report periods. Trend Edits check for increases or decreases in the percentage or number of records reported in each data element category for the current report period by comparing them to the historical data. If the difference between the current data and the historical data is greater than expected, then a critical T flag or non-critical TW flag is applied to that data element category.

Comparative Edits

ETL: No critical C flags

The Comparative Edit Program checks for reasonable distribution of data within each data element category for the current report period. If the percentage reported is greater than expected, then the data element category will fail the Comparative Edit, and will receive the appropriate C flag. Comparative Edits are not applied to Blank or Invalid data.

IMPORTANT: The ETL for each of the next three edit programs is 2% of records with one or more critical errors, based on the total records reported. Critical errors in each of these edit programs must be at or below 2% in order for data to be approved by OSHPD.

Standard Edits

There are 2 types of standard edits, field and relational. Field edits check each record for blank, incomplete, or invalid data element values. Relational edits are more complex and identify illogical relationships between two or more data elements within the same record. Some relational edits include calculations such as age, length of stay and charge per day. Examples of relational edits are: patient is either too old or too young for the reported diagnosis or procedure (age edit); on a newborn record, the Charge per Day is greater than \$2500, but there are no Other Diagnoses or Procedures reported (newborn edit); Missing Principal E-Code for

external causes of injuries, poisonings, and adverse effects is required for the reported principal diagnosis (diagnosis edit). Records with Standard edits are identified by a critical S flag or non-critical SW flag.

Re-Admission Edits

The Re-Admission Edit Program edits for discrepancies between records for patients who had more than one inpatient stay within the report period. This program was first implemented in 1996, when through data analysis, OSHPD discovered that the same Social Security Number (SSN) was being reported on records for different patients. This was mainly happening on Newborn records (the Mom's SSN reported on the baby's record); and on Female records with Medicare as the payer (Husband's SSN reported on the wife's record). To edit for re-admission errors, the records are sorted by the SSN, and then by Discharge Date, so that all inpatient stays for the same patient are grouped together. Using the first record as the "base value," each record in the group is compared to the first record for discrepancies in Date of Birth, Sex, Race, and ZIP Code. The records are also edited for possible errors in transfers between types of care (for the same patient) within the hospital, or when admitted from or discharged to care outside the facility. Records with re-admission edits are identified by a critical K flag or a non-critical KW flag.

Coding Edits

These are relational edits that identify illogical or erroneous relationships between ICD-9-CM diagnoses, procedures and/or E-codes reported within the record. Coding Edits also check for incompatibilities with the official coding guidelines established by the four cooperating parties National Center for Health Statistics (NCHS), Centers for Medicare & Medicaid Services (CMS), American Health Information Management Association (AHIMA), and American Hospital Association (AHA). Records with coding edits are identified by a critical V flag or non-critical VW flag. As with all other non-critical edits, VW flags will not cause data to be rejected. Instead, the non-critical edits are meant to encourage facilities to review the records in question. For complete details, please refer to the ICD-9-CM Coding Edit Manual, located at <http://www.oshpd.ca.gov/MIRCal/programs/IP/editmanual.htm>.

Exception Edits

Exception edits are non-critical and are not applied to the ETL. Exception Edits identify the possible over-reporting or under-reporting of certain data element values. For example, an Exception Edit will alert the facility that 15% or more of the records (excluding newborns) are reported with an Unknown Social Security Number. An X-flag identifies Exception Edits and the results are listed on the Exception Edit Summary Report. The facility should review the data to determine if errors exist and if corrections are needed. OSHPD also uses Exception Edits as an analysis tool when researching the data for possible improvements to the MIRCal validation process. After analysis, an Exception Edit may be converted into a new Trend, Comparative, Standard, or Coding Edit.

EMERGENCY DEPARTMENT and AMBULATORY SURGERY DATA EDIT PROGRAMS

Facilities officially began submitting ED and AS data via MIRCAl effective with encounters on and after January 1, 2005. On a voluntary basis, facilities were able to submit data for the October-December 2004 report period, which allowed for testing of their ED and AS submissions without any mandatory due dates or penalties. This voluntary time period also provided OSHPD with valuable feedback for identifying and resolving technical issues associated with launching a new application, and for fine-tuning the ED and AS submission process before it was officially opened in 2005.

ED and AS data are submitted on a quarterly basis and processed through three edit programs: Transmittal, Standard, and an abbreviated version of the Trend Edit Program. Through data analysis, and vital feedback from facilities and data users, OSHPD is actively developing new and more sophisticated ED and AS edits. Through OSHPD's outreach programs, we will keep facilities informed of the details, including anticipated implementation dates.

Transmittal Validation

The same transmittal edits that are applied to the Inpatient data are applied to the ED and AS data. Exception: Records are checked for a valid Service Date (vs. Discharge Date for inpatient data).

Standard Edits

ETL: 2% of records with one or more critical S flags, based on the total records reported

Similar to Inpatient, ED and AS records with standard edits are identified by a critical S flag or non-critical SW flag and the results are listed on the Standard Edit Summary and Detail reports. The current ED and AS Standard Edit program is a scaled-down version of Inpatient Standard Edit Program. The majority of the edits check for Blank or Invalid values, but OSHPD has also included a few relational edits, such as duplicate Diagnosis or E-codes; missing Place of Occurrence; and age-related edits. Effective January 1, 2006, OSHPD added four new edits for Patient Disposition and Expected Source of Payment. These edits check for "old" codes reported after the obsolete date; or "new" codes reported before the effective date.

Trend Edits

ETL: No critical T flags

Effective January 1, 2006, OSHPD added four ED and AS Trend Edits. These edits check for 20% increase or decrease in the total number of records reported for the current report period, as compared to the past 2 historical report periods. If the increase or decrease is more than 20%, then a critical T flag or non-critical TW flag is applied to the data. Results of trend edits applied to the data are listed on the Trend Edit Summary Report.

Other MIRCal functions associated with the data editing process:

What if the data are correct as reported?

A Variant Action can be requested for any data type (Inpatient, ED or AS), and for any of the MIRCal edit programs except Transmittal Validation.

Variant Action

When a facility's data fail one or more of the MIRCal edit programs, it may be determined by the facility that the data are correct as reported. In this situation, the facility should notify their OSHPD Analyst and request to have the relevant edits "turned off" for specified report periods. Facilities must provide OSHPD with written verification explaining why the data are correct as reported. Once the Variant Action is applied, the data must be re-submitted in order to pass the edit program(s).

What if the reported data are out of compliance with OSHPD's reporting requirements?

OSHPD has two processes that may be implemented for data that are out of compliance.

Request for Modification

Facilities may request a modification to the reporting requirements for Inpatient, ED or AS data. The request must be submitted to and approved by OSHPD **before** the facility submits data for the affected report period. A modification is a mechanism to inform data users of the discrepancy and to ensure that the errors are corrected by the facility within an agreed upon time frame. The modification request must include justification of the hardship that full reporting of data would have on the reporting facility; an explanation of attempts to meet data reporting requirements; and the report periods affected. Modifications are approved for a maximum of one year. Once approved, edits associated with the affected data element(s) are turned-off for the requested report periods. When the time period has ended, the edits are re-activated, and for subsequent report periods, the facility must submit data in accordance with OSHPD's reporting requirements. Data with a modification in past report periods cannot be corrected. For more information, please see Section 97240 of the California Code of Regulations, which can be found in OSHPD's Inpatient and ED/AS Data Reporting Manuals.

Non-compliance

OSHPD may issue a non-compliance for the current report period when data fail one or more edit programs and the facility advises OSHPD that the errors cannot be corrected. Essentially, the facility is "out of compliance" with OSHPD reporting requirements. A non-compliance is a mechanism to inform data users of the discrepancy and to ensure that the errors are corrected by the facility within an agreed upon time frame. When a non-compliance is applied, edit flags are turned off for the data element(s) in error and for a specified time period. This provides the facility with sufficient time to correct the problem. When the time period has ended, the edits are re-activated, and for subsequent report periods, the facility must submit data in accordance with OSHPD's reporting requirements. Data with a non-compliance in past report periods cannot be corrected.

Additional MIRCal resources can be found at www.oshpd.ca.gov/MIRCal/resources.htm:

- Inpatient Edit Flag Description Guide
- ICD-9-CM Coding Edit Manual
- California Inpatient Data Reporting Manual
- ED & AS Edit Flag Description Guide
- California ED & AS Data Reporting Manual

You may also contact OSHPD directly by calling the MIRCal Hotline at (916) 324-6147 or via email at MIRCal@oshpd.ca.gov